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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,895	03/30/2004	Hideki Kuwajima	43890-670	1335

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EXAMINER	
KLIMOWICZ, WILLIAM JOSEPH	

ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/811,895	KUWAJIMA ET AL.	
	Examiner	Art Unit	
	William J. Klimowicz	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8-15 and 18* is/are pending in the application.

4a) Of the above claim(s) *5,9,11 and 15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,10 and 12-14* is/are rejected.

7)☒ Claim(s) *8 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Status

Claims 6, 7, 16 and 17 have been voluntarily cancelled by the Applicant.

Claims 1-5, 8-15 and 18 are currently pending.

Applicant's election without traverse of Species I (corresponding to Figures 1-4) in the reply filed on June 30, 2006, was previously acknowledged.

Claim 5, 9, 11 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 30, 2006.

Drawings

The drawing correction filed on October 17, 2006 has been accepted.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to claims 3 and 13, the phrase "wherein the rotor hub and the rotor-side bearing member ***are made of a same material*** and formed integrally" lacks support in the disclosure as originally filed (emphasis added). More concretely, in an amendment filed on April 19, 2006, claim 3 was amended to add the phrase "are made of a same material and" to original claim 3. There is, however, no support for such a description of the rotor hub relative to the rotor-side bearing in the original disclosure. Although the rotor hub and rotor side bearing may indeed be "fabricated into a single component," this component need not be homogeneous in its composition, or in fact, could simply be two separate components, molded into one. Claim 3, as amended, requires a single material, for which there is no support in the original disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hichiya (JP 05-060135 A).

As per claim 1 (as well as claim 10, rejected, *infra*), Hichiya (JP 05-060135 A) discloses a spindle motor (FIG. 1) for use in a hard magnetic disk drive (e.g., see enclosed Machine-English-Translation at paragraph [0001]) comprising a chassis (3); a rotor magnet (6); a rotor-

side bearing member (internal surface of (2) at (R) which forms a fluid bearing with (1a) of (1)); a stator-side bearing member (external surface of (1)-(1a) at (R) which forms a fluid bearing with the internal surface of (2); a rotor hub (2, 5) having a hollow circular hole (3a) and disposed to the center of rotation (CL); a support column (1) secured to the chassis (3); and a stator armature (8, 9) having a wound coil (9) and disposed to the chassis (3) in a position confronting the rotor magnet (6); wherein the support column (1) is disposed to the chassis (3) in a manner to pass through the hollow circular opening (3a) in the rotor hub (5); wherein the chassis (3) has a protruding portion (e.g., 3h and/or (7)) in an area around the support column (1), and a height of the aforementioned protruding portion is greater than a height of the stator-side bearing member (1a, either of the lower grooves (1a) and/or in conjunction with the upper radial bearings grooves of (1a)) - see FIG. 1, and wherein the rotor-side bearing member (inner bearing surface of (2)), in combination with the stator-side bearing member (1a, either of the lower grooves (1a) and/or in conjunction with the upper radial bearings grooves of (1a)) disposed to the chassis (3), forms a fluid bearing for supporting the rotor hub (5), wherein the protruding portion (e.g., 3h and/or (7)) is disposed outside the fluid bearing (1a, either of the lower grooves (1a) and/or in conjunction with the upper radial bearings grooves of (1a)).

As per claim 2 (as well as claim 12, rejected, *infra*), wherein the fluid bearing (comprises a thrust bearing (e.g., (2d), i.e., (T)) having a dynamic pressure generating groove (see FIG. 2) formed in any of two axially confronting surfaces of the rotor-side bearing member and the stator-side bearing member and a radial bearing (at (R)) having another dynamic pressure generating groove (1a) formed in any of two radially confronting surfaces of the rotor-side bearing member and the stator-side bearing member.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hichiya (JP 05-060135 A).

See the description of Hichiya (JP 05-060135 A), *supra*.

Additionally, as per claim 4, Hichiya (JP 05-060135 A) further discloses wherein the support column (1) retaining the stator-side bearing member comprises a flat portion (e.g., flat lowermost portion of (1) as seen in FIG. 1) and a cylindrical portion (1) (e.g., the upstanding uniform diameter portion of (1) which includes grooves (1a)), and the flat portion (1) and the cylindrical portion (1) assembled into a unit - see FIG. 1.

With regard to claims 4 (as well as claim 14, rejected, *infra*), although Hichiya (JP 05-060135 A) does not expressly disclose wherein the flat portion (1) and the cylindrical portion (2) are separate pieces, Official notice is taken that separate components in disk drives, which are then joined into an assembled unit, are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the flat portion (1) and the cylindrical portion (1) of Hichiya (JP 05-060135 A) as initially being separate pieces.

The rationale is as follows: one of ordinary skill in the art would have been motivated to the flat portion (1) and the cylindrical portion (1) of Hichiya (JP 05-060135 A) as initially being separate pieces in order to facilitate assembly of the device, increase yield by being able to discard a single defective piece, in lieu of a complete single and more comprehensive unity piece, etc.

Additionally, the product by process limitations are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17(footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue*); In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process limitations or steps, which must be determined in a "product by process" claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

As per claims 3 and 13, the rotor hub and the rotor-side bearing member are formed integrally (i.e., fixedly attached to each other). As per claims 3 and 13, however, although Hichiya (JP 05-060135 A) does not expressly state wherein the rotor hub and the rotor-side bearing member are made of a same material, Official notice is taken that component parts used

in hubs and bearings being formed of a common material (i.e., aluminum or steel) are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the rotor hub and the rotor-side bearing member of are made of Hichiya (JP 05-060135 A) as a same (common) material.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the rotor hub and the rotor-side bearing member of are made of Hichiya (JP 05-060135 A) as a same (common) material, in order to provide a less expensive motor by using a commonly available material in as many component parts as possible, as is well known, established and appreciated in the art.

Claims 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hichiya (JP 05-060135 A) in view of Aoyanagi (JP 10-125053 A).

See the description of Hichiya (JP 05-060135 A), *supra.*

As per claim 12, see the rejection pertaining to claim 2, *supra.*

As per claim 14, see the rejection pertaining to claim 4, *supra.*

With regard to claim 10, although Hichiya (JP 05-060135 A) does not expressly disclose wherein the disk drive includes the conventional and ubiquitous signal conversion element, swing member, disk with recording layer, and wherein a cover of the disk drive includes an abutment portion in abutment on one of tip ends of the cylindrical portion constituting the support column in the spindle motor, such structure is well known and used in the art.

As just an example, Aoyanagi (JP 10-125053 A) discloses an analogous spindle motor used in an analogous disk drive, wherein the disk drive includes a signal conversion element (magnetic slider head 13), swing member (actuator (14)), disk (12) with recording layer cover (16) of a disk drive (10), and an abutment portion (protruding portion of cover (16) directly adjacent spindle screw (20)) in abutment on one of tip ends of the cylindrical portion (11a) constituting the support column in the spindle motor (see FIG. 1).

Given the express teachings and motivations, as espoused by Aoyanagi (JP 10-125053 A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the conventional signal conversion element, swing member, disk with recording layer and the structure of an abutment portion, as disclosed by Aoyanagi (JP 10-125053 A), to the drive and spindle motor of Hichiya (JP 05-060135 A).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the conventional signal conversion element, swing member, disk with recording layer and the structure of an abutment portion, as disclosed by Aoyanagi (JP 10-125053 A), to the drive and spindle motor of Hichiya (JP 05-060135 A) in order to minimize vibration of the cover member, while stabilizing it, by affixing the top of the shaft of the spindle column to a protruding part of the top cover, as is well known, established and appreciated in the art, as exemplified by Aoyanagi (JP 10-125053 A).

Response to Arguments

Applicant's arguments filed October 17, 2006 have been fully considered but they are not persuasive.

The Applicant alleges:

> the passage on page 11, line 27-page 12, line 4 of the specification states "here, rotor hub 2 and rotor-side bearing member 3 need not be made as separate components". This phrase can be interpreted to support the claim limitation that the rotor hub and rotor-side bearing member are made of the same material. If two elements are not made as separate components, then logic dictates that they are made as the same component, and therefore made of the same material. While the Examiner suggests that the component need not be homogeneous in its composition, there is no indication that the component is not homogeneous. Thus, the specification does support the claim limitation that the rotor hub and the rotor-side bearing member are made of a same material. Accordingly, Applicants respectfully request that the §112 rejection of claims 3 and 13 be withdrawn.

The Examiner respectfully disagrees based on the Applicant's disclosure, as originally filed. More concretely, claims 3 and 13 recite the phrase "wherein the rotor hub and the rotor-side bearing member ***are made of a same material*** and formed integrally" (emphasis added). Such a recitation, however, lacks support in the disclosure as originally filed. As note previously, in an amendment filed on April 19, 2006, claim 3 was amended to add the phrase "are made of a same material and" to original claim 3. There is, however, no support for such a description of the rotor hub relative to the rotor-side bearing in the original disclosure. Although the rotor hub and rotor side bearing may indeed be "fabricated into a single component," this component need not be homogeneous in its composition, or in fact, could simply be two separate components, formed of completely different material, molded or affixed to each other in one integral piece. Claim 3, as well as claim 13, requires a single material, for which there is no support in the original disclosure.

Applicant's arguments with respect to claims 1-4, 10 and 12-14 are, however, have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 8 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

William J. Klimowicz
Primary Examiner
Art Unit 2627

WJK